

BPW Mitigation Committee
October 5, 2022
Meeting Minutes

1. Welcome and call to order.

Chairman Lee called the meeting to order at 9:32am.

2. Roll Call

Committee Members

D. Preston Lee, P.E., BPW Board member
Austin Calaman, General Manager BPW
Bob Heffernan
Sumner Crosby
Barbara Curtis
Mark Prouty
Candace Vessella, City Council ex-officio

Others

Thomas Panetta, BPW Board Member
Robin Davis, BPW Assistant Manager
Sharon Sexton, BPW

3. Revisions or deletions to the agenda.

None.

4. Review existing emergency response plans to determine the potential need for revisions and/or new mitigation plan.

Mr. Lee shared emergency response plans (ERP) from Inframark and the city of Lewes. A mitigation plan was previously discussed as a long-term event, not necessarily an emergency response. Mr. Lee questioned if a mitigation plan is worth the effort since there are current emergency response plans in place.

Mr. Crosby stated that there is an abundance of information on sea level rise, but not necessarily wind load. Mr. Lee stated that GMB presented at the last meeting and felt that 120 mph wind load is fine for this area and recommended referring to the city building code. Mr. Davis stated that this will need to be verified that the city is going to 2021 code by the end of the year. Mr. Lee stated that the consensus of the committee was to recommend 120mph or the city's building code, whichever was greater. Mr. Crosby believes that everything is in place and that the frequency of activation of the EMR's will increase through time. Mr. Lee stated that this would be stated in the ERP up front. Mr. Lee suggests evaluating the ERP every five years.

Mr. Crosby stated that one of the sources of information on water levels are maintained at Cape May Lewes Ferry. What happens inside (Roosevelt Inlet, the marsh) does not correlate outside (Cape May Lewes Ferry) regarding water levels. Mr. Crosby suggests that BPW pushes real time monitoring on the inside. Mr. Lee stated that measurements were taken at Canal Front Park several years ago and is unsure if this has continued. Mr. Panetta stated that it was

discussed with DelDot about monitoring the canal and canary creek. Nothing has happened. Mr. Panetta believes that monitoring the back bay is something the BPW and city will both benefit from. Mr. Heffernan questioned the cost and if monitors would cost a quarter of a million dollars. Mr. Crosby does not think it would cost more than \$100,000. Mr. Crosby stated that Bethany Beach has real time water monitors around the city. Mr. Panetta stated that the reason DelDot was not interested, is because the system would not be integrated and reported within their system. These storms make it clear that something is needed to protect ratepayer and BPW assets. Mr. Lee suggested the monitoring should be done in conjunction with the city because of road flooding, emergency access, etc. Mr. Crosby stated having other monitors will help to understand when and how levels deviate and ultimately develop a predictability model. Mr. Lee referred to Sandy storm and that the measurements were taken from a buoy and does not give the full picture of what is happening in Lewes. Ms. Vessella stated that the city does not have the ability to do the analysis of the monitors and questioned if the BPW would take on that role. Mr. Panetta stated that DelDot should monitor the information as part of an integrated system. Mr. Crosby stated that the University of Delaware may be an option as well. Mr. Prouty uses the app, Tides Near Me. Mr. Panetta stated Joe Thomas, Director for Sussex County Emergency Operations, extracts information from the national weather service and sends reports during storm events. Mr. Crosby stated that coastal flood warnings come in about 12 hours before they happen, and it would be nice to have more time. More monitors will help to predict when flooding will occur sooner.

Mr. Heffernan questioned how high the water must be before the wastewater treatment plant (WWTP) becomes compromised. There are different levels of compromised: unable to get to the WWTP, actual equipment is threatened, or flooded. Mr. Lee stated that at the National Guard has come in or the BPW has used big pieces of equipment instead of trucks. Mr. Panetta stated that the study being done by GHD to harden the plant includes access. Mr. Heffernan questioned the other infrastructure spread throughout town. Mr. Lee stated that those assets were discussed at previous mitigation meetings about being elevated. Mr. Crosby stated that the NOAA Coastal Inundation Dashboard uses the tide chart and develops the predictive additions based on wind, etc. Mr. Panetta stated that this tool resolves the issue analyzing data.

Mr. Lee would like the BPW and the city to collaborate and approach DelDot and the University of Delaware. This is the committee's consensus.

Mr. Lee stated that the Inframark and city ERP could be updated and questioned if there is a need to prepare a mitigation plan for the BPW. Mr. Prouty stated that he is curious about the study concerning future location or upgrades to the WWTP. Should effort be put into creating a mitigation plan before the results of the study come in. Mr. Lee stated that the study will be completed in the next few months and there will public meetings. Mr. Panetta stated that regardless of the option chosen is a 3-5 year build out.

Ms. Curtis stated that the ERPs that were provided did not mention water treatment plant. A mitigation plan is for long-term and not an emergency plan. Mr. Panetta stated that there will be a plan in place when projects come up, but not necessarily something that can be done by the mitigation committee. Mr. Crosby stated that a road map or acknowledgement of changing conditions in the future would be beneficial.

Mr. Crosby referred to a Sanibel image of the road broken up and the sand coming through. This is an issue that Lewes will face. Mr. Lee stated that this is not the mitigation committee charge. Mr. Crosby stated that streetwise this is a city issue, but implicates what is done with water, wastewater, and stormwater. Mr. Lee questions once Lewes gets to this point, the storms will be so frequent and intense, how many people will still be here. Mr. Crosby stated that attrition will not happen until things wash away. Mr. Heffernan stated it is the charge of the BPW to protect BPW facilities and figure out respond to the storm events and providing services where the city says services need to be.

Mr. Heffernan gave a scenario of a severe cut in power and the ability to serve a minimum. Is there a plan to get hospital running and who is in charge? What happens when the person in charge gets tired. Is there a game plan for rotating shifts. This scenario was not in the emergency plans. Mr. Lee stated that the ERP does list contacts. Mr. Heffernan questioned the shelter in place, whether it is meant to be at the BPW or at home. Mr. Panetta stated that the BPW does have cots, and rafts, and MREs. Mr. Calaman stated that if power is lost on Delmarva Power side, then the BPW has no control. Mr. Panetta stated that the BPW is looking into distributive energy like battery storage, a second power line, or generator. Mr. Heffernan stated that currently the BPW has 100% or 0%, no allocation to be done. Mr. Calaman stated that on the water side there is a tie-in with Tidewater and a casing under New Road if a tie-in if needed.

Mr. Sumner questioned if there are things to migrate the system to better harden the system and be less likely to fail in those events like a hurricane. There is not a mitigation system in place. Mr. Calaman stated that a reserve fund can be viewed as too healthy if not used, but until a community is faced with the challenges of not having utilities for a time, that fund is appreciated. Parametric insurance is a way to hedge that risk. Mr. Lee stated that hardening the BPW assets is the core of what the committee is working on.

Mr. Crosby stated that the ERPs presented are not good enough and that there is work to be done. Mr. Panetta agrees. Mr. Crosby stated that the plan should be a more deliberate and lay out how to go from a present state to future conditions. Mr. Panetta stated that Hurricane Ian is going to give real-life data on undergrounding. Ms. Curtis also pointed out that there was a town that runs on solar power. Mr. Prouty stated that if a generator is sized up for pumps stations, then those assets would be hardened. Mr. Calaman stated that the BPW is adding a generator and bypass at the pump stations.

Mr. Lee stated that there is a standard operating procedure (SOP) for the water treatment plant. Mr. Prouty questioned if chlorine gas is still being used and is there any thought of moving to hypochlorite. Mr. Calaman stated that the water treatment plant is a 2.8-million-gallon plant but can peak out much higher. It is undetermined if the plant would move to use hypochlorite. Mr. Prouty stated that in terms of emergencies, hypochlorite is easier to work with.

Mr. Crosby stated that there a need for a more dedicated document and believes that there is value in some type of roadmap for the future. Ms. Curtis agrees.

Ms. Vessella stated that a resiliency fund was discussed at the executive committee level and will at some point be discussed at the council level. The city budget is suffering from

streams not performing as planned and needs to be reviewed. Mr. Crosby stated that he was not considering the fund just the steps to take for the future. Ms. Vessella stated that funds are needed to take those steps. Mr. Panetta stated that the BPW is going through the same issues with the budget. A lot of the mitigation is based on long term and are risk-based decisions. Ms. Vessella stated that the BPW must operate as a business. For the city, 50% of income streams is not coming from charges from residents.

Ms. Curtis questions what happens if the WWTP is inundated and completely useless. Mr. Lee suspects the city would go on without treatment. Mr. Panetta stated that the inundation level at the WWTP is 9.2 feet. At the level there would be homes that were inhabitable and would reduce the number of users on the system. Ms. Curtis questioned what if there were power outages or roads were unable to pass. Mr. Panetta stated that the GHD study that is being done addresses this issue. Mr. Crosby questioned how many days wastewater could be stored if there is an event. Mr. Calaman stated that it is more like hours not days. The bi-directional flow with the county will be discussed with GHD. Mr. Heffernan questioned what the cost of the bi-directional flow. Mr. Calaman stated it would be the cost of upgrading pumps and valves and estimates between two and four million dollars depending on when the upgrades take place.

Mr. Lee questioned what the vision for the roadmap is. Mr. Crosby would like to set out a statement of conditions on a schedule that will change and require that the BPW to change accordingly. Mr. Lee stated that the next agenda item, will discuss the implementation of design improvements and the schedule of the improvements.

Mr. Lee questioned if the committee is content not creating a separate mitigation plan. Mr. Heffernan stated that he is content until the GHD study is complete. Mr. Lee suggested that the committee reevaluate once the study is complete.

Ms. Curtis questioned if the city has drones. The city does not own drones, but the contractors and engineers do. Tabletop exercises are periodically done and review the emergency plan.

Mr. Panetta reminded the committee to keep in mind the BPW jurisdiction in the city emergency plan.

Committee members will send notes and suggestions on the emergency plans to Ms. Sexton.

5. Develop schedule for implementation of mitigation design improvements.

Mr. Lee provided a utility asset implementation schedule to address the recommendations. Mr. Lee suggested recommending implementation of design improvements by installation or renovation and by what date, 2030 or 2035.

Mr. Crosby stated that each asset has a threshold fail or high threat threshold. Mr. Crosby is unsure if the timeframe 2030 or 2035 is relevant for each asset. Mr. Lee stated that the map of assets of the location with elevation will dictate when the renovations will be needed. Ms. Curtis stated that distributive energy and undergrounding is missing from the list. Mr. Lee stated that the next item on the agenda will discuss "green" programs and policies to recommend to the Board. Mr. Panetta stated that there is a BPW policy that all new services must be

underground. Mr. Crosby questioned if the BPW has evaluated undergrounding certain assets while working on Cedar Street project. Mr. Calaman stated that funding for a study has been applied for.

Mr. Calaman stated that electric is harder to get funding or subsidy. There are no grant writers on staff at the BPW or the city. Mr. Crosby states that ultimately in long run undergrounding is the cheaper route. Proactive rather than reactive.

Mr. Heffernan questioned if it makes any sense for the BPW and the city to share a grant writer. Mr. Panetta stated that there has been discussion of collaborating with University of Delaware grant writers and a meeting is set up. Mr. Calaman stated that this would be under an assistance program and the issue would be that the BPW would be utilizing someone else to tell the BPW "story". Mr. Heffernan doesn't believe grant writers can be delegated, a in house person is needed. Mr. Panetta suggests discussing with the city.

Mr. Crosby referred to the asset list and questioned which ones will require a change in approach versus continuing to do what is being done now. Mr. Lee used manholes as an example. Manholes should be watertight, which most are now, and a locking cover should be included for new replacements. Starting now, every new manhole frame and cover should be watertight. Electric meters can start being placed higher. The issue with raising pad mounted transformers is going to be the sight line.

Mr. Prouty questioned if WWTP section should be expanded into sections. Should the sanitary pipe be broken down into areas. Should all assets be broken down farther since they will be applied to a date, a phase approach.

Mr. Heffernan stated that the asset implementation schedule is confusing. The BPW seems to have direction for some items, like new service being underground, other items need clarity. Mr. Lee stated that the assets on the map under FEMA 2015 at AE7 could have a set timeframe. The timeframe could be according to elevation and those assets in vulnerable areas would be priority. Mr. Crosby agrees.

Mr. Crosby suggested putting every valve, every fixture into a policy. Mr. Lee stated that this is private property and would be getting into building codes. Mr. Prouty stated that a float could be put onto a sanitary sewer lateral that acts like a gate valve. Mr. Calaman stated that this would need to be in the building code for those in the floodplain. Mr. Prouty stated that the float could be installed at the property line, so it would be BPW's. Mr. Prouty believes that the lateral openings are a big problem. Mr. Lee stated that this would be a homeowner's issue. Mr. Panetta suggested using an information package for low lying areas. Mr. Prouty stated that this is not so much a problem for the homeowner but more for the WWTP.

Mr. Panetta referred to the dates and understands that they are linear but questions if the risks linear. Mr. Lee suggested using the DNREC curves. Mr. Lee questions if identifying asset locations and elevations by FEMA 2015 floodplain map would address concerns about

implementation. The FEMA floodplain is the base that the committee is building on. Mr. Davis will update the map with elevations and addresses.

Mr. Crosby questioned how much of an issue are meters. Mr. Calaman stated that electric meters are above ground and water meters are in pits and underground. The ERT will read up to five feet underwater. This is more of an inconvenience. Mr. Crosby is concerned with older homes where the utilities come into the house through the garage. Mr. Panetta questioned if there is a spec on minimum height for electric meters now. Mr. Davis said that the issue is that the meters must be serviceable.

Ms. Curtis questioned if it is possible to put in stormwater storage basins below ground or if it should even be considered. Would green solutions stormwater management fall under the city or BPW responsibility? Ms. Vessella stated that there are challenges to store the stormwater underground because other things cannot be on top of the storage. Space and location are a question.

Mr. Lee stated that Mr. Davis and himself will collaborate on the map and bring back to the next meeting. Ms. Curtis requested that the list be expanded to include solar and undergrounding. Mr. Lee stated these would fall under policies that the BPW should encourage. Plan to discuss at next meeting.

Ms. Vessella suggested that grant writing, flood monitoring system, and Emergency Plan update should be topics taken to the next joint BPW/city meeting.

Mr. Crosby questioned if the committee decided to dispose of temperature related threats in regards demand in electricity. Mr. Panetta stated that Florida has already incorporated these threats, but the temperatures here are nowhere near as alarming. Mr. Lee questioned where to get data on temperature. Mr. Crosby stated that he would talk with Dan Leathers at University of Delaware. Mr. Panetta read an article on the impact of temperature on utility and utility workers. Mr. Lee had questioned what the impact of the high temperatures were in August on the revenues. Mr. Calaman stated that the BPW staff expected increased revenue and it did not come. A larger demand comes from SPI Pharma, and they have backed off production.

6. Prepare Recommendations for BPW Programs and policies to encourage public acceptance and implementations of “green” technologies and practices.

This will be discussed at the next meeting.

7. Schedule next meeting.

The next meeting will be November 1st at 10:00 am.

Aaron Mushrush, Cape Gazette, referred to comments of concern with people not living in the area. Mr. Lee stated that this was completely hypothetically and there was no time frame attached to this. If people are in Lewes, then the BPW will serve them.

Mr. Mushrush questioned what hurricane Ian has done to the transformer supply chain. Mr. Calaman stated that impact has not been heard yet, but the assumption is that there will be an impact. Disaster areas have not started inventory of what assets that need to be replaced.

8. Adjournment

Chairman Lee adjourned the meeting at 11:58am.

Respectfully Submitted
Sharon Sexton
Executive Assistant